

Bulletin

University of Toronto
Friday, March 4, 1977
No. 25 30th Year

Teaching basic English not University's function

U of T is not the place to learn basic English, the Academic Affairs Committee decided at its meeting Thursday, Feb. 24.

In endorsing four of the six recommendations from the Subcommittee on Admissions and Awards, the Committee made it clear that the University is ready to "get tough" with students who haven't acquired sufficient basic English skills to do university-level work when they are admitted. The recommendations, which must still be approved by Governing Council, not only call for pre-admission tests in English, but also suggest that the University should discontinue teaching remedial English.

"It is not the function of the University of Toronto to teach its students basic English composition and grammar skills," the first recommendation states. "The teaching of these skills is the responsibility of the pre-university system. The University of Toronto has the right to expect entering students to have acquired before admission the proficiency in oral and written English they will need to do university-level work."

The recommendations are based on a report prepared by the Wardhaugh Committee, appointed over a year ago by Vice-President and Provost Donald Chant to "gather hard information about the English facility of first year students." The Committee's chairman was Prof. Ronald Wardhaugh, chairman of the Department of Linguistic Studies.

In its report, the Wardhaugh Committee notes that in 1976, a "considerable minority" of students already at University had deficiencies in English skills. "Something must be done for

these students, and something is being done," the report states. "However, it would be wise to try and phase out these efforts over a reasonable period of time while attempts are made concurrently to ensure that all entering students will be proficient in English skills."

Individual faculties and schools are not to be prevented from including expository writing courses in their programs, as long as these are not "mainly remedial", the Academic Affairs Committee recommended, adding that whether such courses should be given as credits toward a degree should be left to the individual faculty.

Remedial courses, the Committee recommended, should be phased out over the next six years.

Meanwhile the Committee plans to give further consideration to two recommendations concerning English skills to be possessed by students whose first language is not English. The subcommittee has recommended that these students too should write proficiency tests, but that courses in English as a second language should be made available to them by the University.

The Academic Affairs Committee will also pass on to Governing Council the recommendation that the University "consider the feasibility of central funding and central co-ordination" of the various writing laboratories, remedial activities and second-language English courses. It is felt that individual colleges, faculties and schools should not be asked to assume a burden that properly belongs to the whole University.

The next meeting of the Committee will take place Thursday, March 10.

J.K.



BONNIE BROWN (left) head of the Engineering Library, has more to smile about than her debut as director of the infamous Lady Godiva Marching Band — the opening on Wednesday, March 2 of the Engineering Library in its new home on "A" storey of the Science and Medicine Library. Dean Etkin officiated at the string-cutting ceremony and several brawny engineering students placed in position a large sign, constructed in record time by Physical Plant, identifying the new repository of 70,000 resurrected engineering tomes.

Grateful insurance adjusters fête librarians

A group of 21 fire insurance underwriters, headed by Lloyd's of London, gave a wine and cheese party for U of T librarians Tuesday, March 1 in appreciation for the massive book salvage operation that took place following the Sandford Fleming fire. Library staff, who worked long hours in freezing conditions the weekend following the fire, saved 70 percent of the 75,000 volume Engineering

Library from destruction by water. This extraordinary salvage operation, which involved evacuation of 70,000 volumes from the water-drenched library, was carried out "with military precision" according to an emergency plan drawn up by University librarians only months before. The plan, which involved fast-freezing and vacuum-drying processes, was based on a model developed in the United States specifically for the sort of emergency encountered at Sandford Fleming. However, this was the first time the reclamation plan had been used in Canada.

The guest list included library staff, University security and main-

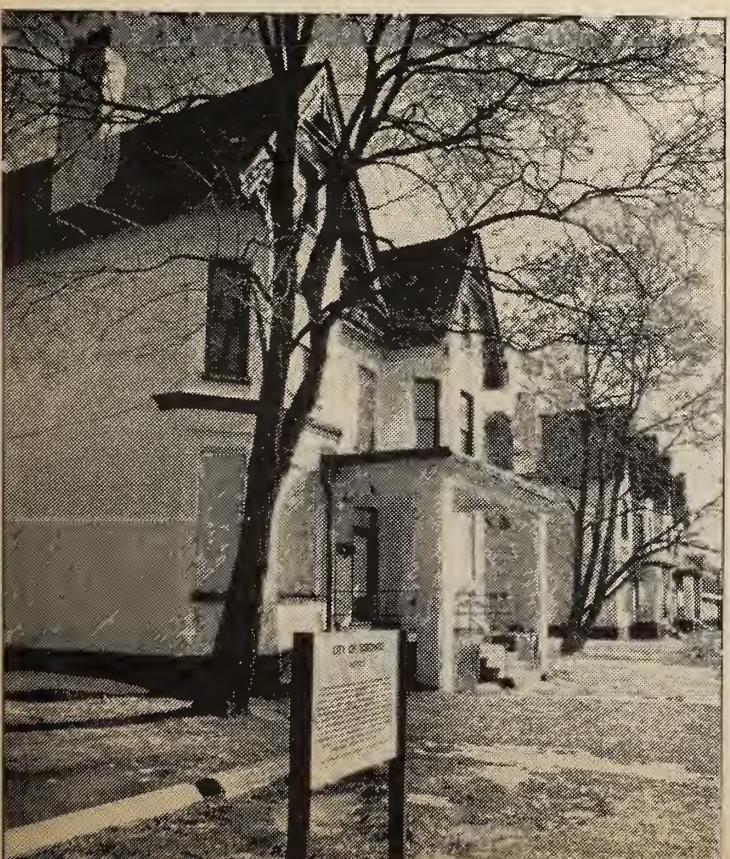
tenance personnel, and many non-University individuals who assisted in the rescue operation. Invited were representatives of Becker Milk Company Ltd., which loaned the University 1,000 plastic crates for moving the wet books; Clifford Van and Storage Ltd., which transported the books; the Canadian Forces Environmental Medicine Establishment, which carried out the vacuum-drying operation; and Richard's Delivery Service, which supplied a refrigerator van to transport the frozen volumes.

It is believed that this was the first time in Canada that insurance underwriters have publicly expressed gratitude in this way.

Visa students' fees to be debated

President John Evans will debate the fee increase for visa students with the Hon. Harry Parrott, Minister of Colleges and Universities, on CTV's "Canada A.M." show, 8 — 9 a.m., Tuesday, March 8.

City loses, U of T wins, demolition proceeds



In a five-minute hearing before Mr. Justice Frank Weatherston at Osgoode Hall, Friday, Feb. 25, the City of Toronto was ordered to grant U of T a demolition permit. On Feb. 14, at a meeting of City Council, aldermen had voted to withhold this permit, required by the University to tear down houses on the site of the proposed \$11 million athletic complex at the corner of Harbord and Spadina. As a result, U of T took the City to court Feb. 25.

The University's lawyer, Mike McQuaid, said the City put in an affidavit, but offered no defence. "The judge read it, and the order for the permit was issued," he said. The City was also ordered to pay for the cost of the hearing.

According to Jack Dimond, special assistant to the Office of the Vice-President, Internal Affairs, tenders will be called immediately. "We'll go out to tender Monday," he said after the hearing, "and the athletic complex will open in two years."

Had the University not received its demolition permit by March 3, it would have lost \$180,000 in interest on a four-year \$3 million grant awarded earlier this year by the provincial government.

Sesqui convocation

The Rt. Hon. Jules Léger, C.C., C.M.M., Governor General of Canada, will receive an honorary Doctor of Laws degree on March 15 at a special Sesquicentennial Convocation.

Nine members of the University community will also receive honorary degrees on March 15, which marks the date in 1827 when George IV signed the Royal Charter giving Upper Canada its first institution of higher learning.

For this special Convocation, a precedent will be set by bestowing degrees on current faculty members. Claude Bissell will receive a Doctor of Letters; Northrop Frye, a Doctor of Letters; John Kelly, a Doctor of Laws; and Marshall McLuhan, a Doctor of Letters.

Several former professors receiving degrees are Helen Hogg, who will be awarded a Doctor of Science; Gordon Patterson, a Doctor of Science; Lawrence Shook, a Doctor of Letters; and J. Tuzo Wilson, a Doctor of Science. C. Malim Harding, former Chairman of the Governing Council will be given an honorary Doctor of Laws degree.

United Nations Secretary-General Kurt Waldheim, will be unable to receive his previously announced honorary degree, due to a problem in scheduling his return from presiding at the opening of the United Nations Water Conference in Mar del Plata, Argentina, March 14.

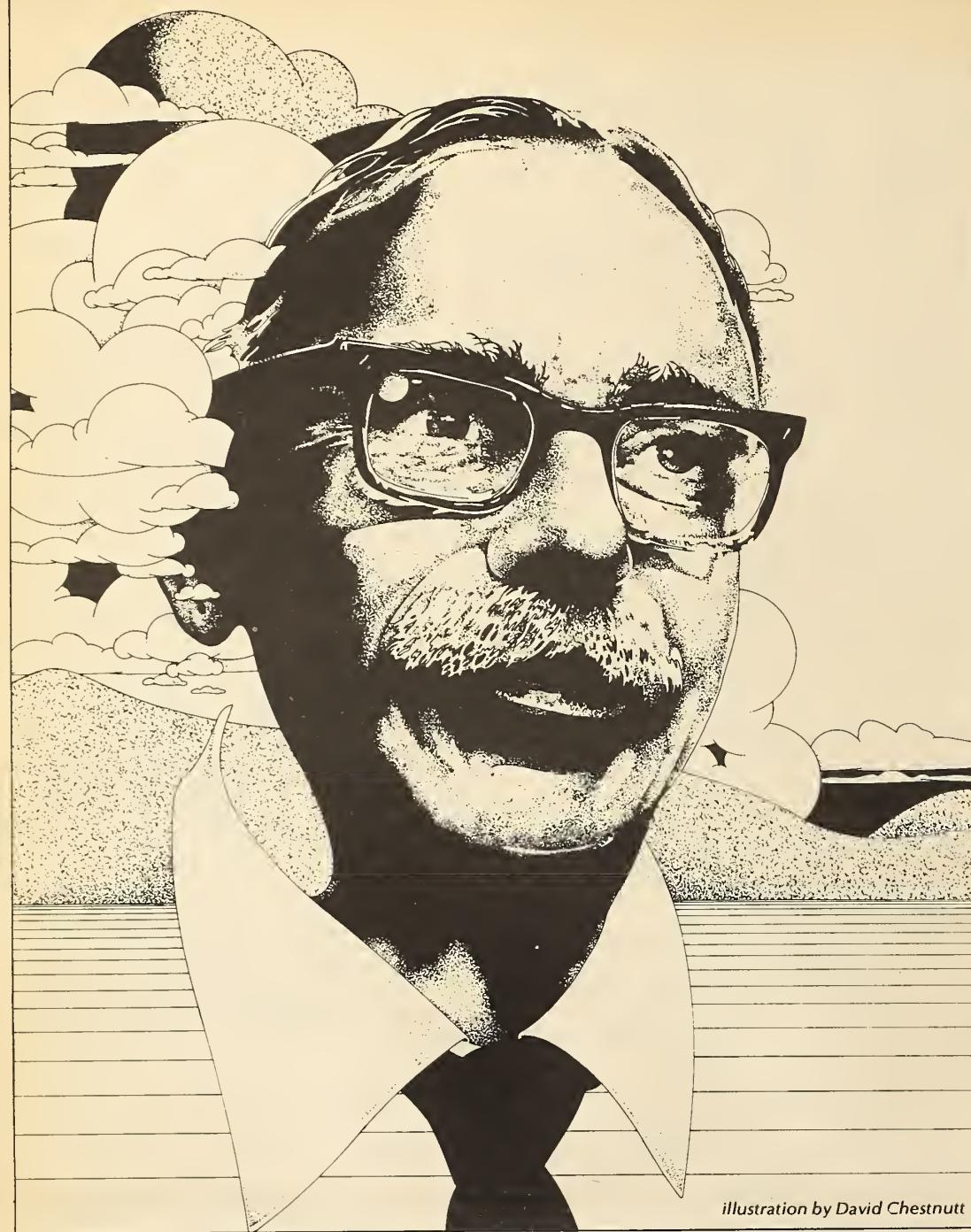


Illustration by David Chestnut

JAMES REANEY (above), Robertson Davies and Ernest Buckler are among the dozens of notable contributors to the special Sesquicentennial issue of the Graduate, the University's alumni magazine, copies of which will be distributed in the next few days to Bulletin boxes and stations on all three campuses.

Many top Canadian scientists are at U of T

Results of a recent CBC survey to determine the "most important Canadian scientists" indicate that many of our country's most prestigious researchers are at U of T.

Carried out by Ray Gallon for the program "Quirks and Quarks", the survey was in no way an attempt at a "scientific poll". Says Gallon, it was "merely a kind of straw vote from the heads of university science departments asking their opinions as to who were the most important researchers in various fields."

In computer science, of the four researchers named, three are U of T faculty. Prof. Stephen Cook, winner of the Steacie Fellowship (*Bulletin*, Jan. 28) was cited as being one of the "four or five outstanding theoreticians in his field" for his work on the speed of computer problem solving and its theoretical limits. Another U of T computer scientist, Prof. Tom Hull, was named for his research into the use of the computer in improving problem solving time in disciplines such as chemistry, physics and aerospace science. He has improved the time taken to solve some problems in these disciplines by 2000. Prof. Calvin Gottlieb, author of *Social Issues in Computing*, was mentioned for his work on the influence of computers on labour, government and social structures, and on the uses which developing countries might make of computers.

In the field of chemistry, Prof. J.C. Polanyi was named for his discoveries in chemical lasers, chemiluminescence and energy transfer in fundamental chemical reactions.

Sociologist Prof. S.D. Clark was cited as being among the "most important" for his work in Canadian social history — specifically, the role of the frontier in national development, and the social history of religion in Canada.

As Gallon noted, the results of

the survey are of necessity unscientific. "Undoubtedly, important names have been left off, and others over-emphasized," he says. "Moreover, the numerical part of the results were deliberately omitted as it was never my desire to run a popularity poll."

Parking restrictions March 14-15

The Founders Day Dinner at Hart House on March 14 and the Sesquicentennial Convocation on March 15 will necessitate parking restrictions on the St. George campus. For both occasions the University will be acting as host to large numbers of distinguished guests who have been invited to take part in the celebrations.

On **Monday, March 14**, vehicles will not be permitted entrance to the front campus after 2 p.m. except for necessary deliveries.

On **Tuesday, March 15**, the entire front campus area will be closed to parking all day.

Governing Council ballots

Ballots have been mailed to the eligible voters for this year's Governing Council election of new staff and student members.

Any eligible voter who has received an incorrect ballot, or no ballot, due to an error in records may contact the Governing Council Secretariat at 978-6576 in order to obtain the correct ballot.

Completed ballots should be returned by Canada Post, Campus Mail or personal delivery to the Governing Council Secretariat, Room 106, Simcoe Hall prior to 12 noon on March 17, to be valid.

Enquiries regarding the election may be directed to the Governing Council Secretariat at 978-6576.

Blood Donor Clinic

Today, March 4, is the last day of the Red Cross Blood Donor Clinic being held on the main floor of the Medical Sciences Building. The clinic will be open until 4 p.m.

FORUM

Student employment picture grim

To the Editor:

I want to comment on an article entitled "Planning perseverance meant summer jobs" which appeared in the *Bulletin* of Feb. 4. The text of the article points out that 8 percent of the students who looked for summer employment were unsuccessful and that many students had to manage more than one job. I think that these statistics from the Career and Placement Centre's survey prove that students were in a difficult employment situation last summer. It is good to see myths like, "students are too lazy to look for work" or "students leave job hunting to the last minute and expect to get the best jobs" laid to rest. In a time of high unemployment for all sectors of society and in a time of rising costs, students are in the squeeze, yet we are expected to find an extra \$100 in tuition this year. The OSAP calculation for weekly living costs has been raised by \$4 a week which does not even compensate for the

rate of inflation over the past year.

Over the next few weeks the Students' Administrative Council will be doing a summer employment survey of its own. We will be mailing the survey to over 2500 undergraduates at this University. We think that our survey will show that the employment situation last summer was worse than the C and P Centre's survey indicates. It is our hope that the results of the C and P survey and the SAC survey will encourage private and public employers to open more jobs to students this summer.

Summer unemployment along with low wages and increasing tuition fees are barriers to students entering and remaining in the post-secondary system. Unfortunately this summer's employment situation for students does not promise to be any better than last year's.

Shirley French,
President, SAC.

Library will continue loans to South Africa

To the Editor:

The *Varsity* of Feb. 23 printed a resolution from CUPE 1230, the union local which represents library technicians, calling on the University Library not to fill interlibrary loan requests received from South African libraries.

While I have no sympathy for the apartheid policies of the South African government, the Library cannot engage in suppressing the exchange of information with

other libraries anywhere in the world.

A meeting was held Feb. 23 with a national representative of the union and the local executive, and after discussion the union local has withdrawn its resolution.

The Library will continue to act on requests from other libraries throughout the world.

Robert H. Blackburn,
Chief Librarian,
University of Toronto Library.

Bait which one dares not rise to, hopefully

To the Editor:

A Latin enigma has been solved with dexterity and even cats will know how to head their application documents, but what of the sinister editorial rubric, *Bulletin*, No. 23, February 11, 1977, p. 2? 'Hopefully,' 'to interface,' the terminal 'about'; too many and too

egregious to be slips, these must be bait, a syntactical *Modest Proposal* to which we shall not, will not, dare not rise.

Cravenly,
Edward A. Synan

Edward A. Synan,
The Pontifical Institute
of Mediaeval Studies.

Ombudsman review

As part of the review of the operations of the Office of the University Ombudsman commissioned by the Governing Council, submissions are invited from members of the University regarding the integrity, usefulness and effectiveness of the office. These should be sent, **not later than March 25**, to Walter Pitman, 2 Fidelia Ave., Toronto, M4N 3E8.

Public forums, at which members of the University may express their views orally, will be held on all three campuses.

Monday, March 14, from 4 to 5.30 p.m.
Scarborough College, Council Chamber

Wednesday, March 16, from 4 to 6 p.m.
Hart House, Debates Room

Wednesday, March 23, from 4 to 5.30 p.m.
Erindale College, Council Chamber



UNIVERSITY
of TORONTO

Bulletin

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Female salaries compared

by Marvi Bradshaw
Internal Affairs

In the summer and fall of 1976, the salaries of some full-time female faculty members were reviewed to determine whether there appeared to be any discrepancies in salary based on sex. The investigation, carried out by Vice-Provost Robin Ross, Robert Brown (Director of Personnel) and Professor Lorna Marsden (representing UTFA) focused on two categories of female faculty members: (1) those whose salaries had been adjusted as a result of the major review conducted in 1973 by Professor Meincke's group; (2) and those hired since July 1, 1973 with tenure-stream appointments.

The first group consisted of 46 faculty members whose salaries had been increased by amounts ranging from \$200 to \$5,000. These allotments were made as a result of comparing the wages of the female academics, on an individual basis, to those of comparable male faculty members — comparable in teaching and research experience. The peers were chosen by the appropriate dean/chairman and/or the female faculty member herself.

For the review, the salaries of these women were charted for the academic years from 1973-74 to 1976-77 and compared to those of the male peers chosen for the 1973 study. Of the 46 cases, it was impossible to investigate 19, since either the female or her peer was no longer at the University. Of the remaining 27, the salaries of the female faculty members appeared to be keeping pace with those of their male peers. In some instances, the woman was earning slightly more than her male peer; in others, the man's salary was the greater. However, the discrepancies were all within the range attributable to individual merit.

The second category — full-time female faculty members hired since July 1, 1973 in the tenure-stream — were investigated in a similar fashion. The salary of each female was compared to that of the men hired in the same department/faculty, at the same rank, and, if possible, in the same year. In

some cases, comparisons were easily made, but in others, there was a lack of suitable peers.

In those instances where there were no men hired at the same rank in that particular year, comparisons in salary were made for the subsequent years. For example, Professor A (female) was hired in Department X in 1974; however, no male faculty member was added to the staff of that department that year. Professor A's salary in 1974-75, 1975-76, 1976-77 was therefore compared to that of Professor B, hired in 1973, and to that of Professor C, a male hired in 1975, with some allowance made for difference in experience. Also, the deans or department chairmen were contacted to confirm the appropriateness of the comparisons and to comment on any possible discrepancies.

Of the 29 cases, nine did not lend themselves to this technique. These nine were in the Faculty of Nursing, where there are no male faculty members. Instead, the salaries of the nine Nursing faculty members were placed on a chart showing the starting salaries of all the male academic staff for each year since 1973 at each rank. The salaries of all nine were within or above the ranges.

Within the second category, the review committee found one case that required some further study, although it is not clear that the anomaly has resulted from discrimination based on sex. This case is presently being investigated by the Provost's Office. The salaries of all the other women were either comparable to those of their male peers, in instances of good peer-matching, or varied slightly within the limits of market-demand and individual merit, in those cases where an exact comparison was not possible.

On the whole, the review committee was satisfied that there was no general trend of discrimination based on sex in salaries among full-time academic staff and that the salary improvements, and in particular those resulting from the work of Professor Meincke's group, had been fairly maintained.

University teaching examined

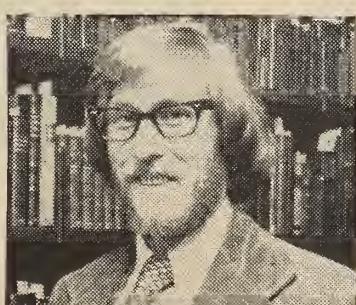
"Education in the University", a non-credit course for university teachers, is being offered by the Higher Education Group, the Division of Studies in Medical Education and the Ontario Universities Program for Instructional Development. Sessions will be on Thursdays, April 14 and 28, May 12 and 26 and June 9 and 23 from 1.30 to 6 p.m.

The course is intended for faculty who have an active interest in teaching and learning and who wish to examine systematically aspects of higher education directly related to teaching and learning. It will be of particular use to those who are involved with, or have responsibilities for, educational development and innovations.

Richard Landon, Rare Books head

Richard G. Landon has been appointed head of the Rare Books and Special Collections Department of the Library, effective Feb. 1. He joined the department as a cataloguer in 1967, became assistant head in 1969 and in June of last year was named acting head on the retirement of Marion Brown.

Landon, who has had an active association with the antiquarian book world for several years, teaches courses in descriptive bibliography and textual criticism and rare books and manuscripts. His research interests are the history of book production and distribution, particularly during the 18th and 19th centuries, and the history of book collecting. In



Richard G. Landon

1975, he was awarded a Council on Library Resources fellowship to study the administration of rare books and special collections departments in large university libraries.

LUIGI PIRANDELLO 1867-1936

Toronto celebrates Pirandello during February and March, 1977

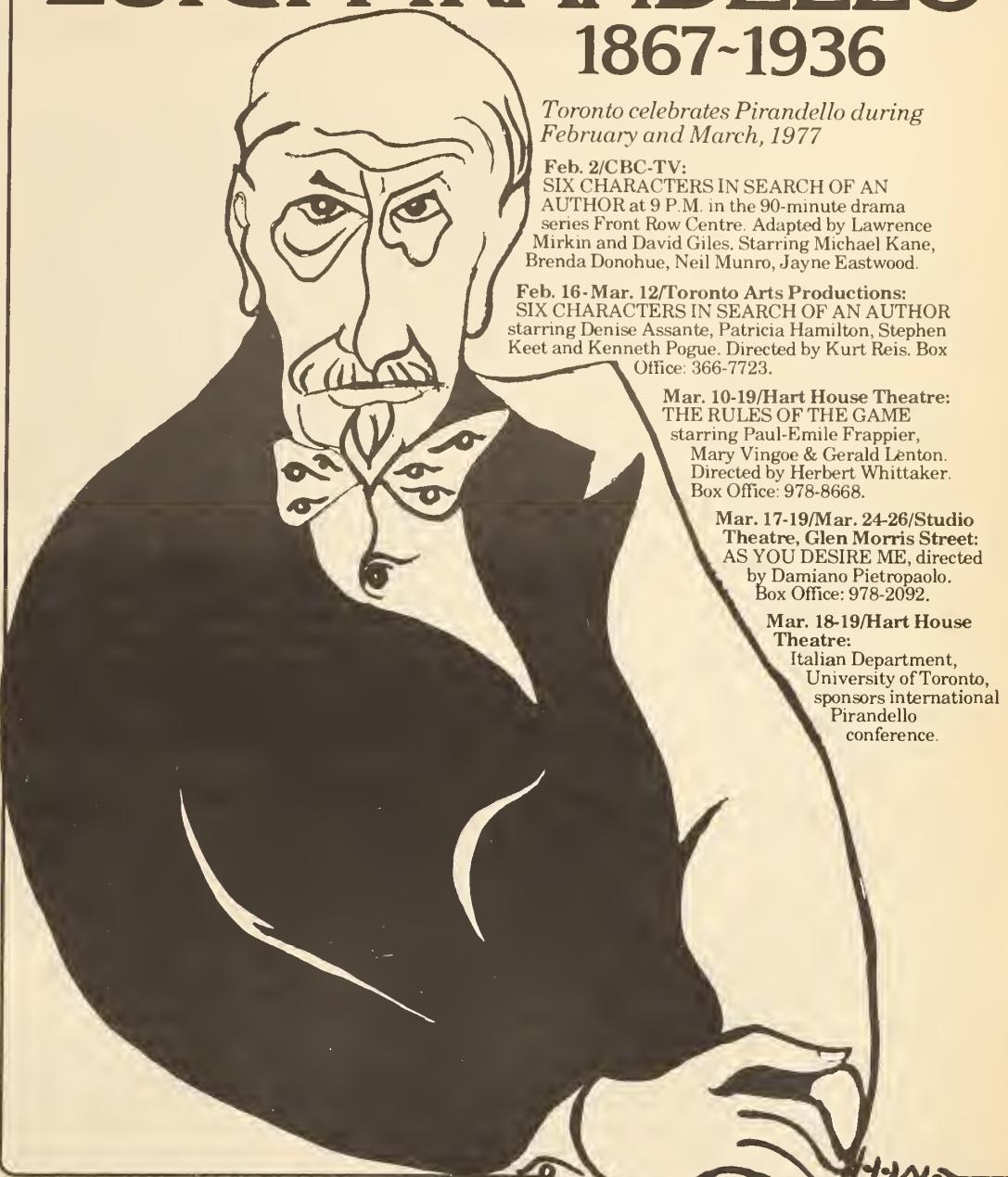
Feb. 2/CBC-TV:
SIX CHARACTERS IN SEARCH OF AN AUTHOR at 9 P.M. in the 90-minute drama series *Front Row Centre*. Adapted by Lawrence Mirkin and David Giles. Starring Michael Kane, Brenda Donohue, Neil Munro, Jayne Eastwood.

Feb. 16-Mar. 12/Toronto Arts Productions:
SIX CHARACTERS IN SEARCH OF AN AUTHOR starring Denise Assante, Patricia Hamilton, Stephen Keet and Kenneth Pogue. Directed by Kurt Reis. Box Office: 366-7723.

Mar. 10-19/Hart House Theatre:
THE RULES OF THE GAME starring Paul-Emile Frappier, Mary Vingoe & Gerald Lenton. Directed by Herbert Whittaker. Box Office: 978-8668.

Mar. 17-19/Mar. 24-26/Studio Theatre, Glen Morris Street:
AS YOU DESIRE ME, directed by Damiano Pietropaolo. Box Office: 978-2092.

Mar. 18-19/Hart House Theatre:
Italian Department, University of Toronto, sponsors international Pirandello conference.



HERBERT WHITTAKER, emeritus drama critic of the *Globe and Mail* and director of Pirandello's "The Rules of the Game" at Hart House Theatre March 10-19, produced this striking poster portrait of the playwright.

Nominations open for UTFA president

The constitution of the U of T Faculty Association requires candidates for president to be nominated by members of the UTFA council. Members of the Association, however, are invited to suggest names to council members.

Nomination forms are available in the UTFA office in the Tip Top Tailor Building, 455 Spadina Ave. The nomination form requires the signature of two members of the council and must be returned to the office by **March 11**.

The election will be conducted by a mailed ballot of the membership in the following two weeks. Ballots must be returned to the office by **March 25**. The new president will be announced at the annual meeting on **March 30**.

Members of the council and the constituencies they represent are listed below.

M.D. Levin — Anthropology, Sociology, Psychology; J.P. Williams — Botany, Zoology; Stuart McLean — Chemistry; P.S. Derow — Classics, Fine Art; R.M. Savory — East Asian, Middle East & Islamic, Near Eastern; Roberta Frank — English, Linguistic Studies; J.A. Fleming — French, German.

N.C. Field — Geography; J.J. Fawcett — Geology; G.P. Clivio — Hispanic, Italian, Slavic; Andrew Rossos — History, History of Science; Chandler Davis — Mathematics, Computer Science; David Gauthier — Philosophy; F.D. Manchester — Physics, Astronomy; L.B. Smith — Political Economy.

D.B. Hill — Humanities; R.A. Fenn — Social Sciences; W.G. Filion — Sciences; Suzanne Whalen — Humanities; Susan Solomon — Social Sciences; Eric Mendelsohn — Physical & Life Sciences.

Peter Fitting — St. Michael's; P.L. Bruckmann — Trinity; P.H. Hess and Chaviva Hosek — Victoria; John Dyson — New, Innis, University, Woodsworth.

J.J. Moran — Pharmacy, Nutrition & Food Science, Microbiology & Parasitology; Merrijoy Kelner — Preventive Med. & Biostatistics, Rehab. Med., Health Admin., Behavioural Sciences; D.H. Osmond — Pharmacology, Physiology, Anatomy, Art Applied to Med.; C.C. Yip — Clinical Biochem., Biochemistry, Med. Genetics & Biophysics, BBDMR; R.L. Ellis — Dentistry.

F.M. Buckingham — Forestry; S.A. Schiff — Law; Margaret Anderson — Library Science; B.A. Kalyman — Management Studies; John Hawkins — Music; D.R. Gendron — Nursing; R.E. Stone — Physical & Health Ed., Athletics & Rec.; Ben Schlesinger — Social Work.

F.P.J. Rimrott, K.C. Smith and F.A. DeLory — Applied Science and Engineering; Antonia Sheehan, L.J. Lafave and T.W. Goodenough — Education; Lila Laakso, K.M. MacKenzie, Harriette Velazquez and Joan Winears — Combined Libraries.

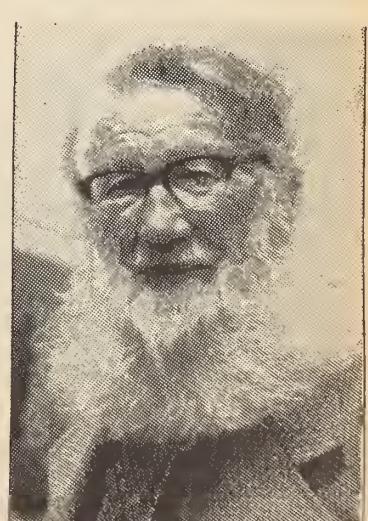
In memoriam

Prof. Donald Putnam

Donald F. Putnam, Professor Emeritus of Geography and one of the 10 original faculty members who undertook the planning and development of Erindale College, died on Wednesday, Feb. 23.

Prof. Putnam has long been recognized as one of Canada's outstanding geographers. In 1951 he was invited to become first president of the Canadian Association of Geographers, and two years later was awarded the Coronation Medal in Geography by Queen Elizabeth II. In 1969 he received the Massey Medal from the Royal Canadian Geographical Society. That same year, the Extension Division at U of T established the Putnam Award, in recognition of his contributions to the program for part-time students.

Prof. Putnam spent most of his career at this University. Having received his Ph.D. in 1935, he joined the Department of Geo-



Prof. Donald Putnam

graphy in 1938, where he subsequently served as chairman from 1953 until 1963.

STAFF NOTES

Arts and Science

Geology

The Department of Geology was well-represented on the program at the Geological Society of America meeting held in Denver in November.

Papers were given by N.T. Arndt and Prof. A.J. Naldrett, with J.G. Arth of the Geological Survey, "Rare-earth Geochemistry of Archean Komatiitic and Tholeiitic Lavas, Munro Township, Ontario"; N.T. Arndt, "Melting Relations of Spinifex-Textured Komatiites at One Atmosphere: A Comparison with Crystallization of Natural Komatiite Lavas"; Andrée de Rosen-Spence, "Volcanology and Development of the Central Noranda Volcanic Pile, Noranda, Quebec"; Prof. A.M. Goodwin, "Archean Volcanoes in Southwestern Abitibi Belt, Canada: Form, Composition and Development"; Prof. S.E. Kesler and M.J. Issigonis with J.F. Sutter of Ohio State, "Tectonic Evolution of Porphyry Copper Mineralization in Panama"; and Profs. V. Rajamani and A.J. Naldrett, "Experimental Modelling for the Composition of Ni-Cu Sulfide Deposits".

Professor Loris Russell spent a month during the summer on field work in central Alberta. Later he attended the International Geological Congress in Sydney, Australia, where he presided at the meetings of the International Palaeontological Association and gave a paper on the palaeogeography of the marsupials.

Professor D.W. Strangway gave an invited paper entitled "Electrical Structure of the Shallow Crust" at a symposium on the nature and physical properties of the earth's crust, sponsored by the U.S. Office of Naval Research, held in Vail, Colorado.

In October, Dr. Strangway and colleagues presented three invited papers at the colloquium on "Water in Planetary Regoliths" held at Dartmouth College. The papers were: "Electromagnetic Sounding in Permafrost Terrain", "Electrical Sounding of Lunar Regolith" and "Effects of Water on the Electrical Properties of Planetary Regoliths" by G. Olhoeft who is now at the U.S. Geological Survey.

in Denver. The colloquium was convened by the Dartmouth Department of Earth Sciences and the U.S. Army Cold Regions Research and Engineering Laboratory. Dr. Strangway also took part in a meeting of the Society of Exploration Geophysicists where he presented a paper on "Electrical Sounding in the Crust".

In November, he represented the Canadian Geoscience Council at a meeting of the presidents of Canadian scientific societies where strategy for the funding of basic science was reviewed. At a conference on "Comparison of Mercury in the Moon" held in Houston, he gave a paper, with H. Sharpe, entitled "Mercury, the Moon and Magnetism". Following this meeting, he spoke on "Revolutions in the Earth Sciences and Resources" at a meeting of the Canadian Institute of Mining and Metallurgy.

Dr. H.C. Halls attended the Canadian Association of Physicists meeting held in Quebec City in June where he presented a paper entitled "The great conglomerate test". Co-authors of the paper were Dr. H.C. Palmer of the University of Western Ontario and Lauri Pesonen.

In September, he attended the third annual European Geophysical Society meeting held in Amsterdam where he gave a talk on "The use of remagnetization circles in paleomagnetism" and also read a paper for Dr. D.J. Dunlop on "Viscous remagnetisation due to burial metamorphism". While overseas, he visited the geomagnetism laboratory at the University of Utrecht and the research laboratory for archaeology at Oxford University.

Professor S.E. Kesler spent almost three months in Mexico during the summer where he studied two deposits. One of these is a continuation to the north of a study of Central American and Caribbean ore deposits recently completed in co-operation with Prof. George Cumming at the University of Alberta. Dr. Kesler also made a trip to Newfoundland in late August.



Mathematician honoured

Professor F.V. Atkinson of the Department of Mathematics has been awarded the Mak Dougall-Brisbane Prize by the Royal Society of Edinburgh for the excellence of his work in mathematical analysis and for his distinguished contributions to the Society's publication *Proceedings A* (Mathematics).

School of Physical and Health Education

At the International Congress of Physical Activity Sciences, held in Quebec City in July, Dr. Peter Klavora presented a paper on "Effects of Injury History on Pre-competition Anxiety in Competitive Athletes". In October, the international rowing body, FISA, invited him to give a paper on international rowing styles at their fourth international coaches' colloquium in Stockholm.

University College

Professor V.E. Graham was a visitor at York University in November. He conducted a graduate seminar and gave a lecture, both on festivals and triumphal entries in France in the Sixteenth Century.

Victoria College

Professor John Baird delivered a paper entitled "Two Revolts Against the Marriage Act, 1780-81," in October to the Midwestern meeting of the American Society for Eighteenth-Century Studies held at the Museum of Art in Toledo. Following the meeting he visited Princeton University where he preached a sermon in the Chapel.

Library Science

Professor Margaret Cockshutt was re-appointed by the Forest

Press Committee to serve on the decimal classification editorial policy committee for a second six-year term. At a meeting in November she was re-elected vice-chairman of the committee for another two-year term.

Dr. Harold J. Segal will continue as associate professor of pharmacy administration, but now in a part-time capacity.

St. Michael's College

Professor Petro B.T. Bilaniuk gave a paper entitled "A Theological Analysis of the Letter of Misael, the Metropolitan-elect of Kiev, to Pope Sixtus IV (on its 500th Anniversary: 1476-1976)" at the first Mid-Atlantic States Conference on Patristic, Mediaeval and Renaissance Studies held at Villanova University in September.

Medicine

Dr. Paul G. Walfish, associate professor in the Department of Medicine and director of the thyroid research laboratory and clinical investigation centre, Mount Sinai Hospital, has reported that the laboratory has successfully coordinated a newborn cord blood thyroid function screening program for the detection of neonatal hypothyroidism and the prevention of mental retardation for Metropolitan Toronto hospitals. The project is sponsored by an Ontario Ministry of Health research grant and has also been supported by a major equipment

grant from the Hospital for Sick Children Foundation as well as a preliminary developmental grant from Health and Welfare Canada.

Neonatal hypothyroidism (cretinism) has been found in an incidence of approximately one in every 4,000 live births and has been documented to be the commonest endocrine-metabolic cause of mental retardation currently known. Early diagnosis by laboratory testing permits the initiation of therapy before two months of age and can prevent mental retardation.

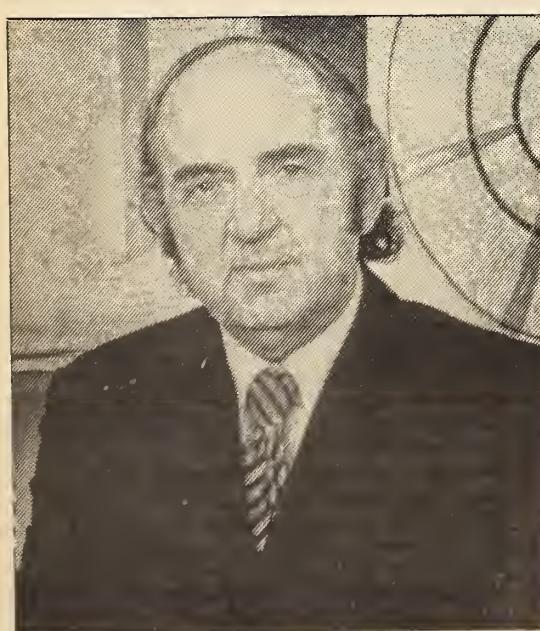
The endocrine division at the Hospital for Sick Children has also been collaborating in this project to assist in final diagnosis as well as institution of therapy for long-term evaluation of results.

Dr. Walfish has given invited lectures on a progress report on this work entitled "Evaluation of Three Thyroid Function Screening Tests for Detecting Neonatal Hypothyroidism". In June, he was the guest speaker at the annual meeting of the Association of Genetic Counsellors of Ontario held at McMaster University. In November, he presented a paper at the American Thyroid Association workshop on screening program for neonatal hypothyroidism held in Quebec City and was guest speaker at the Bicentennial symposium of the Delaware Valley Clinical Radioassay Society held in Philadelphia on thyroid function evaluation and neonatal screening for hypothyroidism.

Professor John J. Hsieh, Department of Preventive Medicine and Biostatistics, presented a paper entitled "A Method of Constructing Multiple-Decrement and Cause-Deleted Life Tables" at the ninth conference of the Society of Epidemiological Research held in Toronto in June.

In August, he gave a paper entitled "Methods of Computing Person Years" at the joint International Biometric and American Statistical Association meetings in Boston.

Dr. Henry Z. Movat, Department of Pathology, was an invited speaker at an international symposium on "Inflammation and Anti-inflammatory Drugs" held in Rio de Janeiro in November.



Dr. J.W. Steiner

At a recent meeting in Rio de Janeiro, Dr. J.W. Steiner, associate dean, Faculty of Medicine, was elected to represent Canada and the United States on the administrative committee of the Pan-American Federation of Associations of Medical Schools. In this new responsibility, Dr. Steiner succeeds Dr. R. Brian Holmes, Dean of Medicine.



Professor Rika Maniates

Professor M. Rika Maniates was visiting professor of Music at Columbia University from January to June, 1976. While there she gave graduate lectures at several universities, including the University of Connecticut and Rutgers University.



Professor Lothar Klein

Professor Lothar Klein, Faculty of Music, has been chosen the winner of the centennial music competition for an orchestral piece by the University of Manitoba. Dr. Klein's composition for choir and orchestra, *Dorick Music*, has a text taken from Elizabethan madrigals. *Dorick Music* had its premiere performance at a special ceremony on Feb. 28 marking the centennial of the University of Manitoba.

STAFF NOTES

Institute for Aerospace Studies

Dr. R.C. Tennyson attended, as the Canadian representative, a meeting of a special committee set up by the National Academy of Sciences in the United States to study surface effect ships and the material problems associated with their coated fabric skirts. The meeting was held in Washington, D.C., in August.

In September, he presented a paper entitled "The Need for Improved Aircraft Crashworthiness Design", J. Bird, co-author, at the second Canadian symposium on Recreational and New Generation Light Aircraft, sponsored by the Canadian Aeronautics and Space Institute in Toronto in September. He also presided as chairman of a session on "Emerging Developments in Materials Joining" sponsored by the Canadian Welding Society in their annual "Update" conference, held at Toronto.

In October, he gave an invited seminar on the "Uses of the Reflection Type Polariscopic with Photoelastic Coatings and Models" at the National Society for Experimental Stress Analysis meeting in Toronto and an invited paper on the "Abrasion Resistance of Coated Fabrics" at the annual Canadian Aeronautics and Space Institute's conference on Air Cushion Vehicles held in Calgary.

Professor L.D. Reid presented an invited lecture on "The Influence

of Wind Shear and Low Altitude Turbulence on Aircraft" at the Canadian Workshop on Wind Engineering held at the Atmospheric Environment Service in Toronto in September. He attended the seventh conference on Aerospace and Aeronautical Meteorology and symposium on Remote Sensing from Satellites at Melbourne, Fla. in November where he presented a paper entitled "A Flight Path Correlation Technique for Assessing the Impact of Turbulence in the Atmospheric Boundary Layer on Aircraft During the Landing Approach."

Professor I.I. Glass attended the 26th Canadian Chemical Engineering Conference held in Toronto in October where he gave an invited paper on "Utilization of Geothermal Energy".

Dr. A.A. Haasz attended the 2nd ANS topical meeting on the Technology of Controlled Nuclear Fusion held in Richland, Washington, and presented a paper on "Subsonic and Hypersonic Gas Target Neutron Generator Studies." The paper details some of the theoretical and experimental research performed at the Institute in the area of fusion technology.

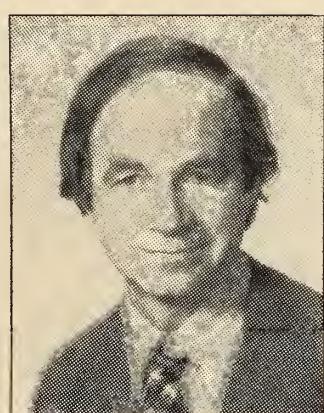
Professor J.B. French gave a talk on "Mass Spectroscopy in the Upper Martian Atmosphere" at a Department of Chemistry colloquium in December.

Dr. D. W. Lewis

Dr. D.W. Lewis has been elected president of the Canadian Society of Public Health Dentists for 1976-77.

In October, he gave a paper on "The Development of Provincial Children's Denticare Programs in Canada" at the American Public Health Association meeting in Miami. In November, he spoke to the Burlington Dental Academy on "Dental Health Care Services Research — Auxiliaries, Dental Practice and the Computer".

He has been appointed consultant to the Alberta Task Force on Dental Care Services. This group has been given the responsibility of assessing, on a regional basis, the oral health status of Albertans relative to available dental services, and recommending dental pro-



gram changes where needed.

Dr. Lewis will be in Cuba for the month of May studying its dental care system on a World Health Organization fellowship.

Institute for Environmental Studies

Dr. J.R. Brown gave a paper on asbestosis to the Epidemiological Research Society in Toronto in June.

Dr. P.H. Jones was a Visiting Centenary Fellow at the Adelaide College of Advanced Education in South Australia from June to August. While there, he conducted an inter-institutional think-tank and seminar to develop an environmental group in Adelaide, gave a seminar entitled "Policy alternatives for water management" and a lecture on "Pollution problems in the Great Lakes" to the Geography Department; lectures on "Environmental Education" and "Phosphates in the Aquatic Environment — A Case Study" to the Education Department and a lecture on "Biological Waste Water Treatment" to the Biology Department.

In June, he also gave a seminar entitled "Science Education for Humanists" at the Torrens College

of Advanced Education and lectures on the "Role of the University in Environmental Studies" at the University of Adelaide; "Problems in managing the Great Lakes", South Australian Institute of Technology; "Waste Water Treatment", Flinders University; "Eutrophication of Lake Erie", University of Adelaide and "Urban Water Management" to the Geography Teachers Association of South Australia.

In July, he gave two lectures at the University of Adelaide: "The Development of the Institute for Environmental Studies at the University of Toronto" and "Technological Alternatives in Water Pollution Control". In August, he gave a lecture entitled "An Engineer's Perspective on the Environment" to the Royal Geographical Society of South Australia and one on "Global resources and urban growth" to the Nature Conservation Society of South Australia.



New Chairman of Engineering Science

Professor Frank C. Hooper, Department of Mechanical Engineering, has been appointed chairman of the Division of Engineering Science, effective July 1, 1977.

In the fall, Prof. Hooper was awarded the Engineering Medal by the Association of Professional Engineers of the Province of Ontario. This is awarded to members of the profession who have made a substantial and notable contribution to technical advancement of engineering and was given to Prof. Hooper for "his farsighted advocacy of the practicability of solar energy heating."

Arts and Science

Zoology

Professor F.M. Barrett was a co-organizer and major presenter at a workshop on sexuality and the disabled held at the Royal Ottawa Hospital in April. He was publicity chairman and a member of the organizing committee of the joint meeting of the Canadian and Ontario Entomological Societies held in October and presented a paper entitled "Cuticular Sclerotization: An Example of Secondary Modification of an Extra-cellular Product".

Dr. S.S. Tobe attended the XV International Congress of Entomology held in Washington, D.C. in August and presented three papers: "An assay for nutrient transfer to the larva of the tsetsefly, *Glossina morsitans*" for which D. Lococo was co-author; "Vitellogenesis in a viviparous cockroach ovary in relation to the rate of juvenile hormone secretion" for which B. Stay was co-author; and "Juvenile hormone metabolism, biosynthesis and release from corpora allata".

Professor R. A. Liversage gave a lecture entitled "Regeneration Studies in Urodele Amphibians" at Dalhousie University in November.

Botany

Professor T. C. Hutchinson, while on sabbatical leave last year in England, gave several seminars. At the University of Liverpool he discussed "The effect of oil spills on the vegetation of the Canadian arctic" and at the University of

Sheffield, "The impact of smelter emissions on the ecology of Canadian forest eco-systems". He spoke on "Effects of nickel, copper and arsenic emissions in Canada" at the National Environmental Research Council symposium on air pollution effects, study session on fluorides and metals, held at Newcastle-upon-Tyne.

To the Environmental Research Group at the Harwell Atomic Energy Research Council he spoke on "Wet and dry acid precipitation from smelter emissions in Canada and their interactions on heavy metal toxicity". In London, he gave seminars on "Ecological effects of heavy emissions from Canadian smelters" at Chelsea College, University of London and on "Heavy metal studies in Canada: A review" to the applied geochemistry research group at the Imperial College.

In November, Prof. Hutchinson presented an invited lecture to the Royal Society of London on "Effects of Airborne Metal Emissions from Smelters and Coal Burning on Canadian Ecosystems" in the series entitled "Airborne Heavy Metals and the Biosphere".

Philosophy

Professor Charles Hanly presented a paper entitled "Affect et Pulsion" at the scientific meeting of la Société Psychoanalytique de Montréal in January.

East Asian Studies

Professor W.A.C.H. Dobson read a paper entitled "Towards a Historical Grammar of Classical

Chinese — the Medieval Shift" at the 30th International Congress of Human Sciences in Asia and North Africa held in Mexico City in August.

Middle East & Islamic Studies

Professor Albertine Jwaideh was invited to organize a panel on "Accommodations of Bedouin Tribal Society to Differing Environments" and herself read a paper on "The Adaptation of Bedouin Tribal Patterns to the Settled and Semi-settled Life of Cultivators in Mesopotamia" at the annual meeting of the Middle East Studies Association in Los Angeles during November.

Professor Eleazar Birnbaum was the main speaker at a special session on "The Romanization of Ottoman Turkish", held jointly by the Middle East Studies Association of North America and the Middle East Librarians Association at their annual meetings in Los Angeles in November.

Near Eastern Studies

In January, May and June Professor D.B. Redford excavated the remains of the temple Gempaten at Luxor, Upper Egypt, on behalf of the Akhenaten Temple Project. This was the first time that a temple of the heretic Pharaoh Akhenaten had been physically located through excavation at the ancient Egyptian capital.

In February and July he was the guest of Major-General Robert Larose, commander of the Canadian UN contingent at Ismailia. During his visits he lectured to the officers and men of the contingent on archaeological work in Egypt undertaken by Canadian scholars.

In October Professor Redford lectured to the Community Association of Darien, Conn. on "Ancient Egyptian art during the 18th Dynasty."

Royal Conservatory of Music

Adrienne Shannon was fourth prize winner in the XV Busoni International Piano Competition. She was the only Canadian of 52 contestants from 17 countries; the ten members of the jury were distinguished European artists. Following the competition, she was invited to play on RAE radio in Bolzano and later taped a broadcast for RIAS in Berlin.

Music

Dean John Beckwith addressed a panel on the performing arts at the 1976 Couchiching Conference at Geneva Park in August.

During the fall term, he was an invited commentator, one of five from Canada, at the international bicentennial conference held in Washington, D.C., on "The United States and the World" organized jointly by the Smithsonian Institution, the American Council of Learned Societies and the American Studies Association. He acted as chairman of a session at the symposium on musical criticism organized by the music department of McMaster University. He also gave illustrated talks on current Canadian music at the University of Edinburgh and the Guildhall School of Music in London, Eng.

In February, Dean Beckwith lectured on "Earlier Canadian Music" for the Canadian Studies program at Middlesex College, University of Western Ontario.

PH D ORALS

Since it is sometimes necessary to change the date or time of an oral examination, please confirm the information in these listings with the Ph.D. oral office, telephone 978-5258.

Monday, March 7

Oscar Brown, Department of Medieval Studies, "The Doctrine of Law in the *Summa Contra Gentiles*: An Approach to an Integral Thomistic Legal Theory." Thesis supervisor: Prof. J. Owens. Room 111, 63 St. George St., 2 p.m.

Ralph Lee Patton, Department of Mathematics, "Characterisations by Length in Generators of Unitary Groups Over a Skew Field with Characteristic Not Two." Thesis supervisor: Prof. E.W. Ellers. Room 309, 63 St. George St., 2 p.m.

Thursday, March 10

John J. O'Connor, Department of English, "The Last Three Steppes: The Canadian West as 'Frontier' in Prairie Literature." Thesis supervisor: Prof. M.T. Wilson. Room 111, 63 St. George St., 3 p.m.

Friday, March 11

Richard Peddie, Department of

Geography, "Mobility, Conversion and Neighbourhood Change — Methodology and Application in Alexandra Park (Toronto), 1951 - 1970." Thesis supervisor: Prof. P. Cave. Room 111, 63 St. George St., 2 p.m.

Thomas Lozar, Department of English, "An Introduction to the Work of Kenneth Patchen." Thesis supervisor: Prof. R.A. Greene. Room 307, 63 St. George St., 3.15 p.m.

Tuesday, March 15

Pieter Brakel, Department of Political Economy, "Production Relationships, Market Structure, Firm Behaviour, and the Supply of Exports: An Application to the Canadian Forest Product Industries." Thesis supervisor: Prof. N.K.

Choudhry. Room 111, 63 St. George St., 2 p.m.



Hart House Warden Jean Lengellé, evidently pleased with the recently-consumed contents of this bottle, discusses the fine points of Italian wines at a wine-tasting evening held Feb. 3 in Hart House. This was the second in a series of four such events, planned by Lengellé to promote a more informed appreciation of wine.

RESEARCH NEWS

Canada Council Negotiated Grants

New information booklets have been received from the Canada Council for the Council's two negotiated grants programs in the humanities and social sciences: program grants, fostering team research projects over long periods of time; and grants for major editorial projects, intended to ensure long-term research and publication support for outstanding works of scholarship. The new booklets describe applications procedures and eligibility requirements as well as terms and conditions for grants in operation. All negotiated grants require consultation with appropriate University officials. For further information, call 978-6475 or 978-5588.

Canada Council Conference Support Limitations

An advisory letter from the Canada Council stipulates new limitations for support for scholarly conferences. The "working maximum" for all conference grants will henceforth be \$3,000, intended solely to help defray costs of transportation and subsistence (limited to \$30 per day) for major participants. Application forms, available in ORA, while themselves unchanged, must now be accompanied by abstracts of papers to be delivered and a *curriculum vitae* for each principal participant. Call 978-2874 for information.

Ontario Soft White Winter Wheat

A communication from the Ontario Wheat Producers' Marketing Board asks for information to assist in determining the extent to which research is being conducted on Ontario softwhite winter wheat and its utilization in new products, whether for food or industrial purposes. The board invites discussion with any researchers who would be available to meet with a representative. If anyone knows of research projects, whether completed, in progress, or intended, which may relate to the OWPMB's interest, ORA would like to be advised; please call 978-6475.

Canadian Diabetic Association

Canadian Diabetic Association applications deadlines are announced for March 15 and September 15 in 1977. Applicants are now required to forward five copies of an application to the agency.

Supported by the Charles H. Best Fund, research projects should be related to the cause, treatment or cure of diabetes mellitus and complications thereof. Application forms and further information are available in ORA, telephone 978-2163.

OMTC Deadline Extended

The Ontario Ministry of Transportation and Communications has extended to March 14 the agency's deadline for receipt of proposals related to its specified research needs. Information on the preferred areas of research and application forms are available in ORA, telephone 978-2874.

Connaught Applications January Competition

ORA has received 69 applications in the major spring competition for support from the Connaught Fund. The competition, for awards in two Connaught programs (research grants and new staff grants-in-aid), includes submissions from all divisions of the University. These are presently in process of review, by external appraisers and by review panels of the Connaught Fund, with award announcements from the Connaught Committee expected in late May.

The applications received, by major divisions, are as follows:

Life Sciences

18 research grant applications, 16 new staff applications. *

Physical Sciences

17 research grant applications, 5 new staff applications.

Humanities

9 research grant applications.

Social Sciences

3 research grant applications, 2 new staff applications. *

* One new staff application is being reviewed by both panels.

DIVISION I Humanities

Classical Studies
Comparative Literature
Drama
East Asian Studies
English
French Language & Literature
Germanic Languages & Literature
Hispanic Studies
History
History of Art
History & Philosophy of Science & Technology
Italian Studies
Linguistics
Medieval Studies
Middle East & Islamic Studies
Music
Near Eastern Studies
Philosophy
Sanskrit & Indian Studies
Slavic Languages & Literatures

DIVISION II Social Sciences

Anthropology
Criminology
Culture & Technology
Educational Theory
Geography
Industrial Relations
International Studies
Law
Library Science
Management Studies
Policy Analysis
Political Economy
Russian & East European Studies
Social Work
Sociology
Urban & Community Studies
Urban & Regional Planning

DIVISION III Physical Sciences

Aerospace Science & Engineering
Applied Statistics
Architecture
Astronomy
Biomedical Engineering

Chemical Engineering
Chemistry
Civil Engineering
Computer Science
Electrical Engineering
Environmental Studies
Geology
Industrial Engineering
Mathematics
Mechanical Engineering
Metallurgy & Materials Science
Physics

DIVISION IV Life Sciences

Anatomy
Biochemistry

Botany
Clinical Biochemistry
Community Health
Dentistry
Forestry
Immunology
Medical Biophysics
Medical Science
Microbiology & Parasitology
Nursing
Nutrition & Food Science
Pathology
Pharmacology
Pharmacy
Physiology
Psychology
Surgery
Zoology

JOB OPENINGS

Below is a partial list of job openings at the University. Interested applicants should read the Promotional Opportunity postings on their staff bulletin boards, or telephone the personnel office for further information. The number in brackets following the name of the department in the list indicates the personnel officer responsible. Please call:

(1) Sylvia Holland, 978-6470; (2) Wendy Chin, 978-5468; (3) Manfred Wewers, 978-4834; (4) Ann Sarsfield, 978-2112; (5) Beverley Chennell, 978-7308; (6) W.C. Hooper, 978-8749.

Secretary I (\$7,700 — 9,060 — 10,420)
Pharmacy (4)

Secretary II (\$8,470 — 9,970 — 11,460)
Personnel (4), Governing Council (1), Medical Genetics (4), Career Counselling & Placement Centre (4), Institute of Biomedical Engineering (4)

Secretary III (\$9,330 — 10,970 — 12,620)
Library Automation Systems (1), Division of Laboratory Animal Science (4)

Laboratory Technician II (\$10,370 — 12,200 — 14,040)
BBDMR (4), Pharmacology (4), Pathology (4), Microbiology & Parasitology (4), Surgery (4), Medicine (4)

Electron Microscopy Technician II (\$10,370 — 12,200 — 14,040)
Pathology (4)

Porter (\$7,000 — 8,230 — 9,460)
Athletics — Benson Building (1) 4.40 — 11.30 p.m., Monday to Friday

Graphic Artist II (\$9,330 — 10,970 — 12,620)
Scarborough College (2)

Programmer II (\$12,110 — 14,250 — 16,380)
Health Care Research Unit (4), Computer Centre (3)

Administrative Assistant II (\$12,110 — 14,250 — 16,380)
Private Funding (1)

Engineering Technologist II (\$12,110 — 14,250 — 16,380)
Physical Plant (1)

Administrative Assistant III (\$14,900 — 17,530 — 20,160)
Dean's Office, Faculty of Medicine (4)

Energy Management Engineer (\$20,420 — 24,020 — 27,620)
Physical Plant (3)

Specialist helps patients cope with heart reality

by Robbie Salter

Every year 80,000 Canadians die from heart disease, Canada's number one health problem. It causes half of all deaths in Canada and afflicts one in four adults over 18.

About half of the deaths in men aged 35-64 are due to heart disease.

From his window on the eighth floor of the Toronto General Hospital, Tom looked out on the traffic passing the office where he usually worked. That he was now a candidate for open heart surgery seemed unreal.

But the memory of the pains that, beginning during his forty-seventh birthday dinner, had chewed their way down his left arm and into his neck and jaw, was real enough.

Real, too, was the process of being admitted to hospital, of having a monitor's electrodes attached to his chest so as to record his heart beats on a spiky graph, his own personal television. It was like a Bergman film in which he was both protagonist and spectator. And the memory of the cardiac catheters being threaded from his groin and elbows into the chambers of his heart and back out again, like two surgical spies surveying the site of the battle-to-be, was also impossible to dispel.

Yet, only last month, never suspecting he would find himself here, he had given to the Heart Fund at the office — his father having died of coronary artery disease at just about the age Tom was now.

A familiar and popular person on both the eighth floor of the TGH and the Intensive Care Unit on the ninth, is Nancy Howard, a medical social worker with psychiatric training who is an important link between patients and staff.

Mrs. Howard, who did her undergraduate studies at U of T and holds a Medical Social Worker's degree from Boston's prestigious Simmons College School of Social Work, says that the psycho-social rehabilitation of every patient should begin well in advance of surgery, and stresses that open heart surgery should not be viewed as a "life-divider", a kind of marker between the old life and a magic new one, but as an element added to life's continuum.

"Some patients are more easily rehabilitated than others, both psychologically and socially," she says. "For example, those who have had a heart valve replaced seem somewhat better able to view the replacement as a completed repair — a realistic philosophy that may stem from having had rheumatic fever in childhood. The person having a by-pass operation for coronary artery disease — whose

symptoms are not usually manifest until adulthood — seems more introverted and, with a more complex personality and social history, is often more difficult to rehabilitate socially."

Tom remembered the day the social worker had met his family, who, he considered, had all behaved like characters out of "Who's Afraid of Virginia Woolf?" The monitor's graph had spiked a lot that day and Tom realized he had been reacting to the behaviour of his family who, in turn, had been letting him know they felt abandoned. He resolved to make his stay in hospital and his return to society as easy as possible for them.

All patients experience some anxiety, but an excess in the cardiac patient bears directly on the success of surgery, so, although no one who needs and will benefit from it is denied surgery, the clinically depressed patient is counselled first, either by Mrs. Howard or a psychiatrist. The social worker has observed the various kinds of heart surgery her patients undergo, including Tom's five-hour ordeal, when his life was in limbo and his circulation and breathing were seconded to the complex heart-lung machine, so she is able to describe and explain the procedures involved.

When Tom came out of the anaesthetic, he was dreaming he was a knight under heavy armour, a halberd in his chest. Prometheus bound. Bionic man. New pain where the sternum had been opened now overlaid the old. Unable to speak because the respirator, with its relentless, raspy rhythm was now breathing for him, he returned, with a blink of the eyes, to the comforting squeeze of the social worker's hand.

He slept a lot during the next nights and days.

"During the two to five days the patient is in Intensive Care, he or she can feel rather cut off from the world, even though one nurse is in constant attendance and the family can visit briefly," says Mrs. Howard.

To Tom, the days back on the ward were the most irksome of all. Although he was out of bed a few days after surgery, enjoying an easy affability with other patients, like deck-mates on a cruise, he was restless, and the incision on his leg was irritatingly itchy. At this point in his recovery, a kinesiologist measured his muscle function and blood flow rates, and gave him the confidence to believe he wouldn't come apart when he walked up stairs or down the street to the office.

Even after successful surgery and a smooth



Nancy Howard

convalescence, many patients are slow to return to work. Almost half of the by-pass patients don't ever get back to work, partly because employers — failing to realize that an employee's physical status has actually been improved — are reluctant to hire or take back someone who has had heart surgery, and also because many of these patients are still troubled by the original symptoms — angina and fatigue — even after successful surgery when there is no apparent organic reason.

One morning 15 days after surgery Tom was ready to go home. In the window he caught sight of his reflection, his incision showing bright pink, like a battle scar. He watched the snow falling on the trees and on the heads of people passing his office, and pictured himself back with family and friends, back at work. He was even looking forward to the post-operative interview with Nancy Howard in a few weeks' time.

After this, medicine may never be the same again

by Sheila Robinson Fallis

Parapsychology. The word conjures up pictures of crystal balls, seances and weird hags predicting the imminent end of the world.

However, for Dr. Howard Eisenberg, a graduate of the McGill medical school who has done graduate work in both psychology and psychiatry and who lectures at Innis College, the School of Continuing Studies, Sheridan College and York University, parapsychology is something quite different. Eisenberg defines parapsychology as the study of the extended powers of the brain. Paranormal medicine, he says, is the clinical application of parapsychology, and is probably best known because of biofeedback, which has recently received much publicity as a method for coping with stress.

Practising what he preaches, Eisenberg also operates his own psychology clinic, where he uses such heretical techniques as yoga, transcendental meditation, hypnosis and his own highly developed powers of telepathy to treat his patients.

Next weekend, March 12-13, under the auspices of the School of Continuing Studies, the work of many months will come together for Eisenberg, as U of T will offer the first official academic conference on parapsychology and paranormal medicine. And probably to the surprise of fervent disbelievers, the conference has received accreditation from the

Canadian College of Family Physicians.

According to Dr. Eisenberg, parapsychology has not been given a fair airing in Canada. He hopes that next week's conference will right this by attracting the academic community and stimulating debate. To this end he has assembled an impressive array of psychologists, physicists, anthropologists and physicians to present the experimental methodologies, philosophical implications and practical applications of a more spiritual model of reality.

The 11 speakers at the conference include: Dr. Carl Simonton, Medical Director of the Cancer Counselling and Research Center, Fort Worth, who uses biofeedback principles and meditation in conjunction with standard medical management in treating terminal cancer patients to achieve a startling rate of remission; Dr. Robert Leichman, a physician who has developed his own psychic powers to the point where he uses them to diagnose and treat both physical and mental diseases; and Dr. Fritjof Capra, a physicist at Berkeley who has recently published a book exploring the parallels between the underlying concepts of modern physics and the basic ideas of Eastern mysticism.

"Twenty years ago some physicists saw the convergence of physics and mysticism," says Dr. Eisenberg. "But only now is the public becoming aware." He believes the public and the academic community in the United

States are more sympathetic to the claims of parapsychology than Canadians are. In 1969, the American Association for the Advancement of Science accepted the Parapsychological Association as a member — perhaps because, more and more, physical scientists are coming to believe that there may be no definitive mechanical explanation of reality, that at its most basic level, matter is indefinable. As world-renowned scientist James Jeans has written, "the universe begins to look more like a great thought than a great machine."

Though Einstein's theory of relativity allows for the possibility that there are objects that move faster than light, no one has yet been able to locate one.

Professor H.C. Corben, who teaches physics at Scarborough College, spoke recently on the existence of faster-than-light particles as part of the Ontario Science Centre Lecture Series, and allowed that these objects — dubbed tachyons — might be capable of extremely radical behaviour. "People have suggested that I could fire a tachyon at another person, who would then send one to someone else, and so on until the last person in the chain sends one to me. This last tachyon would arrive before the one I sent out in the first place," Corben says. He adds that other interpretations of

If this is so, it does not take such a monumental leap of faith to speculate that the human brain might be capable of behaving in unexpected ways by crossing barriers of space and time.

"People still reject parapsychology on the grounds that there is no proof," says Dr. Eisenberg. "They are ignorant of the research that is going on in the field."

New knowledge about the psychic powers of the brain are emerging through better research techniques. "For example, we

know now that heightened psychic awareness runs in families, but we don't know yet whether it's cultural or hereditary.

"I believe the most important thing I can teach anyone," says Dr. Eisenberg, "is that psychic experiences are possible."

If he has his way, next week's conference will be the first step towards convincing the academic community that the study of parapsychology is not only legitimate, but essential for furthering our understanding of both psychology and medicine.

Now you might see 'em, now you might not

Though Einstein's theory of relativity allows for the possibility that there are objects that move faster than light, no one has yet been able to locate one.

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the theory of relativity preclude this apparent paradox.

Corben says that while Einstein's theory shows that nothing could be made to accelerate beyond the speed of light, it does not preclude the existence of a particle "born" with a velocity exceeding that of light.

A number of experiments have been designed and carried out to discover the existence of tachyons, Corben states, but the results have not been conclusive. "Let me say that at present there is no firm evidence that they exist," he says, "and that there is disagreement among scientists as to what their properties would be if they did, and further disagreement concerning how to look for them."

The purpose of research into tachyons, and of associated theoretical studies, is to throw new light

on the theory of relativity. "This theory has stood the test of more than 70 years," says Corben, "and has not been found wanting. It has deepened our understanding of space and time, and of the universe, and has taught us a great deal about the properties of electrons and other particles of which the world is made."

"In recent years, scientists in the Soviet Union, the United States, Italy, Canada and many other countries have been re-examining the question of whether anything can move faster than light," Corben says. "We are all in agreement that at present there is no compelling experimental evidence for such objects, but we are not at all in agreement about the properties such objects would have if they existed."

J.K.

SESQUI **T** EVENTS

FRIDAY MARCH 4

Galileo and the Pendulum: Observations, Experiment and Theory in the Act of Discovery (Colloquium) Prof. Bert S. Hall, State University of New York, Buffalo. IHPST common room, 4th floor, Textbook Store. 2.10 p.m.

Laser Vaporization Techniques Applied to the Analysis of Aerosols and Solids (Colloquium) Dr. A.R. Barringer, Barringer Research. 158 Lash Miller Chemical Laboratories. 4 p.m.

The School for Wives, Molière, directed by Richard Howes. Erindale College Student Theatre Group. Studio Theatre, Erindale. March 4 and 5 at 8 p.m. Tickets \$1.25. Telephone 828-5349.

Music of Elizabethan England by The Elizabethan Enterprise (Concert in Scarborough Sesquicentennial Renaissance Festival) Meeting Place, Scarborough College. 8.30 p.m. Tickets \$2. Telephone 284-3243.

SATURDAY 5

The Joints that Allow Us to Stand and Look Ahead (Lecture) Prof. Edward H. Simmons, chief of orthopaedic surgery, Toronto East General and Orthopaedic Hospital. Convocation Hall. 8.15 p.m. (Royal Canadian Institute)

Bygone Toronto (Symposium) A look at Toronto from 1900-1916. Participants: Allan Anderson; Betty Tomlinson; Prof. J.M. Bliss, Department of History; William Dendy, Toronto Historical Board; Edith Firth, head of Canadiana and manuscript section, Central Library; Profs. G.M. Craig and J.M. Careless, Department of History; Prof. J.T. Lemon, Department of Geography. Medical Sciences Building. 9 a.m. to 5 p.m. Registration fee \$25. Information 978-2400. (School of Continuing Studies)

Science Open House at Scarborough College. March 5 and 6 from 12 noon to 6 p.m.

SUNDAY 6

Keeping an Eye on the Earth (Ninth lecture in special Sesquicentennial series at Science Centre) Prof. Keigo Iizuka, Department of Electrical Engineering. Main auditorium, Ontario Science Centre. 3 p.m.

MONDAY 7

The Earliest Musical Forms of Antiphonal Psalmody: the Evidence of the Milanese Manuscripts (Lecture) Prof. Terrence Bailey, University of Western Ontario. 116 Edward Johnson Building. 4.10 p.m. (Music and SGS)

Computer-assisted Evaluation of Therapeutic Programs (Seminar series Medical Applications of Computers) Dr. Gary Miller, York University. 3163 Medical Sciences Building. 3 p.m.

Reading from the work of Dickens given by the Department of English. Profs. Cynthia Pratt, Ila Goody, Guy Hamel and Hans de Groot. Downstairs sitting room, Women's Union, 79 St. George St. 4.10 to 5.30 p.m.

Meeting to discuss Secondary/Post-Secondary Interface Study report. Resource: Professor Milton Israel, Vice-Provost and Wim Kent, Department of Admissions. Innis Town Hall, Innis College. 8 p.m. (U of T Alumni Association)

TUESDAY 8

Experimental Earthquake Studies (Lecture) Prof. W.F. Brace, Massachusetts Institute of Technology. 130 Mining Building. 4 p.m. (Geology and SGS)

Shape Stability of Cellular and Dendritic Interfaces During Solidification (Lecture) Dr. J.S. Langer, Carnegie Mellon University. 158 Wallberg Building. 4 p.m. (Centre for the Study of Materials and SGS)

The Heritage of China: The Literary Heritage (Third of four Sesquicentennial lectures) Prof. W.A.C.H. Dobson. 205 Faculty of Library Science, 140 St. George St. 8 p.m.

4.30 p.m. (Archaeological Institute of America, Toronto Society)

A Historian's View of Modernisation: The Case of Medieval Europe (Sociology colloquium) Prof. Brian Stock, St. Michael's College. Lounge, Borden Building. 2.45 p.m.

Ecological studies in relation to secondary succession and the establishment of vegetation in the Sudbury region of Ontario (Departmental seminar) Prof. Keith Winterhalder, Laurentian University. Room 7 Botany Building. 4 p.m.

Andy Krehm Trio. Pop concert. East common room, Hart House. 12 noon.

Insect Sound Communication (Sixth of eight lectures, Communication in Animals) Prof. Glenn Morris, Erindale College. ROM Theatre. 8 p.m.

Metastability and Instability in Phase Transformation (Colloquium) Prof. J.S. Langer, Carnegie Mellon University. 102 McLennan Physical Laboratories. 4.10 p.m.



Last Saturday night, with a 3 — 2 win over the Yeoman of York University, Captain Ron Harris and his Varsity Blues skated away with the U of T team's 37th Queen's Cup, emblematic of the hockey championship of the Ontario University Athletic Association.

Aspects of Degenerative Joint Diseases (Wallace Graham Memorial Lecture) Dr. Eric L. Radin, Children's Hospital, Boston. Main lecture theatre, Sunnybrook Hospital. 8 p.m.

Realtime Very Long Baseline Interferometry with a Communications Satellite (Colloquium) Dr. J.L. Yen, Department of Electrical Engineering. David Dunlap Observatory. 4 p.m.

The Light of Experience (Films in series Civilization, Kenneth Clark) Scarborough College, two screenings H-214 at 12 noon and S-128 at 4 p.m.

Physics in Canada/Canadian Physics (Third lecture in series To Know Ourselves, lectures and panel discussions on the Symons Report) Prof. Lynn Trainor, Department of Physics. West Hall, U.C. 1 p.m.

The Natural Sciences and the Symons Report (Third panel discussion in series To Know Ourselves) Profs. Lynn Trainor and R.L. Armstrong, Department of Physics; Prof. E.J. Barbeau, Department of Mathematics. Croft Chapter House. 4.15 p.m.

Hamlet and the Modern Audience (Second of four New College Sesquicentennial lectures) Prof. G.A. Hamel, Department of English. 1016 New College. 4.30 p.m.

A Roman Provincial City: Trier (Lecture) Prof. Edith M. Wightman, McMaster University. Lecture room, McLaughlin Planetarium.

Janet Krause, violin; **Martin Shaver**, 'cello and **Walter Delahunt**, piano. Music Room, Hart House. 8.30 p.m.

Eugene McNamara, poetry reading. 1016 New College. 8 p.m.

THURSDAY 10

Influence of diet on brain monoamine metabolism (Lecture) Dr. John Fernstrom, Massachusetts Institute of Technology. 2173 Medical Sciences Building. 11 a.m. (Nutrition & Food Science and SGS)

The Future of Public Sector Collective Bargaining (Lecture) Prof. Jacob Finkelman, formerly Faculty of Law. Room 302, Centre for Industrial Relations, 123 St. George St. 12 noon. (Industrial Relations and SGS)

Tomorrow, Tomorrow and Tomorrow... (Lecture on procrastination in series KNOW Sweat) Tom Cooper. International Student Centre. 12.30 p.m. (Ontology Club)

Psycho-biography and American political history: A critical view (First of two lectures) Prof. James T. Patterson, Brown University. 1087 Sidney Smith Hall. 4 p.m. (History and SGS)

Violence and Representation in the mythical text (Third of five lectures Theory and the Text) Prof. Rene Girard, Johns Hopkins University. Room 3, New Academic Building. 4.15 p.m. (Comparative Literature)

The Heritage of China: The Transformation of China's Heritage since 1949 (Last of four Sesquicentennial lectures) Prof. Victor Falkenheim, Department of Political Economy. 205 Faculty of Library Science, 140 St. George St. 8 p.m.

Insect Sound Communication (Sixth of eight lectures, Communication in Animals) Prof. Glenn Morris, Erindale College. ROM Theatre. 8 p.m.

Metastability and Instability in Phase Transformation (Colloquium) Prof. J.S. Langer, Carnegie Mellon University. 102 McLennan Physical Laboratories. 4.10 p.m.

For information concerning Sesquicentennial events, phone 978-5000.

SATURDAY 12

Canadian Space Programme (Lecture) David A. Golden, president and chief executive officer, Telesat Canada, Ottawa. Convocation Hall. 8.15 p.m. (Royal Canadian Institute)

Explorations in Parapsychology and Paranormal Medicine (Conference) Inter-disciplinary examination of experimental methodologies, philosophical implications and practical applications. March 12 and 13. Participants: Dr. Fritjof Capra, University of California, Berkeley; Dr. Walter Houston Clark, retired, formerly Andover Newton Theological School; Dr. Howard Eisenberg, York University; Dr. Stanislav Grof, Esalen Institute; Dr. Michael Harner, New School for Social Research; Dr. Stanley Krippner, Humanistic Psychology Institute; Dr. Robert Leichtman; Stephanie Matthes-Simonton, Cancer Counselling and Research Center, Fort Worth; Charles Panati, science editor, Newsweek; Dr. Carl Simonton, Cancer Counselling and Research Center; Dr. Charles Tart, University of California, Davis; Alan Vaughan, editor, *Psychic Magazine*. Medical Sciences Building. 9 a.m. to 5 p.m. Registration fee \$50. Telephone 978-2400. (Continuing Studies)

International Buffet (Event in International Festival) Food from around the world. International Student Centre. 6 p.m. \$2.50 per adult, \$1 per child, advance and at door. Telephone 978-2564. (ISC and SAC)

International Variety Show (Event in International Festival) Songs and dances from several nations. Cody Hall. 8.30 p.m. Admission \$1, advance and at door. Telephone 978-2564. (ISC and SAC)

SUNDAY 13

Chemical Reaction: The Molecular Dance and Why It Matters (Tenth lecture in special Sesquicentennial series at Science Centre) Prof. John Polanyi, Department of Chemistry. Main auditorium, Ontario Science Centre. 3 p.m.

Concert by winners in Kiwanis Music Festival. Meeting Place, Scarborough College. 3 p.m.

MONDAY 14

How Do Enzymes Catalyze the Transfer of Phosphoryl Groups? (Colloquium) Prof. Jeremy Knowles, Harvard University. 158 Lash Miller Chemical Laboratories. 4 p.m.

Radiology Reporting Systems (Seminar series Medical Applications of Computers) Dr. B.B. Hobbs and H.D. Covvey, Toronto General Hospital. 3163 Medical Sciences Building. 3 p.m.

Industrial Engineering for the Future: Operational Research and the Wider Problems of Society (Third of six seminars) Eric C. Williams, formerly president, Operational Research Society, U.K. 202 McLennan Physical Laboratories. 4 p.m.

How to Succeed As An Alumnus (Speech at Faculty of Management Studies party and annual meeting) The Hon. Alastair Gillespie, Minister of Energy, Mines and Resources. Hyatt Regency Hotel. 6 p.m. to midnight. Tickets \$5, cash bar. Telephone 978-4913. (Management Studies Alumni Association)